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The European ecological network "Natura 2000" and the appropriate assessment for projects and plans under Article 6(3) of the Habitats Directive

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Abstract

The European Union and its Member States have been creating a network of protected areas for habitats and species since 1979. In 2017, this included over 27,500 Natura 2000 sites, a combined area of over 18 percent of the land surface in the EU and around 395,000 km^2 of marine territory. According to Article 6(3) of the Habitats Directive 92/43/EEC[1] (HD), any projects and plans within these sites or in their vicinity require an appropriate assessment to ensure that they will not have a significant impact on the integrity of Natura 2000 site. The project or plan is to be rejected by the national authorities if this cannot be excluded without remaining reasonable scientific doubts. This article explores the procedural steps and the requirements that must be examined, which are now covered by comprehensive European Court of Justice (ECJ)[2] case law. Numerous questions that are relevant in practice, however, have only been considered by national courts to date. These will be introduced in this article based on the decisions of the German Federal Administrative Court (BVerwG)[3] and will be the focus of a critical discussion. Questions on the range covered by the term

1 Council Directive of 21.5.1992 on the conservation of natural habitats and of wild fauna and flora, OJ EU no. L 206, of 22.7.1992, p. 7 *et sqq*.

2 All ECJ decisions can be located based on their case number and can be freely accessed under: curia.europa.eu/juris/recherche.jsf?language=en

3 From 2002 onwards, BVerwG decisions can be located based on their case number and can be freely accessed under: http://www.bverwg.de/entscheidungen/entscheidungen.php. References to the locations of earlier decisions are provided in this article.

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project and on determining significant impacts will be entered into in greater detail in two further articles, given the scope of the aspects to be examined and explored.

Keywords
European Union (EU), Natura 2000, appropriate assessment, impact assessment, Article 6(3) Habitats Directive, Birds Directive, legal requirements, methodological questions, case law, ECJ, Germany, SCI, SPA, BVerwG

1. Introduction

Over 35 years ago, the European Economic Community also became a community with common environmental standards, years before European environmental legislative powers were incorporated into the treaties. In 1979, the European Economic Community laid down provisions for the protection of European wild bird species and migratory birds in the Birds Directive (BD) 79/409/EEC (newly adopted in Directive 2009/147/EC) for the then 9 Member States. The justification given at the time still applies today: wild bird species are part of a common European heritage and the severe decline in their numbers is an environmental problem that crosses national borders and requires joint responsible action. Through this directive, the European Community simultaneously implemented some of its obligations arising from the new international treaties on nature conservation: the Ramsar Convention on Wetlands of International Importance (1971), the Bonn Convention on the Conservation of Migratory Species of Wild Animals (1979) and the Bern Convention on the Conservation of European Wildlife and Natural Habitats (1979). The protection of wild birds was predestined for European Community legislation due to the cross-border mobility of bird species. As part of the Convention on Biodiversity (CBD) that was signed in 1992, the European Community extended protection to endangered plants and non-bird species through the Habitats Directive and created the European ecological network "Natura 2000", which now includes over 27,000 sites, consisting of the sites of Community importance (SCI) under Article 4 HD and of the special protection areas (SPA) provided by Article 4 BD. In the (still) 28 EU Member States, these sites combine to protect over 789,000 km^2 of the land area in the EU (approx. 18.15 %) and around 395,000 km^2 of European marine territory (approx. 7 %).[4] The network serves to protect 231 selected types of habitat and 450 animal and plant species that have been identified as conservation priorities.[5] The habitats and species that are to be protected by Natura 2000 are the common heritage of the European Community, which is why the Birds Directive and the Habitats Directive envisage specially targeted and enhanced conservation provisions and measures.[6] In combination with the general species conservation provisions in

4 European Commission 2017, p. 8 *et seq.*

5 European Commission 2015b, p. 3.

6 ECJ, adjudication of 23.5.1990 – C-169/89, margin number 11; adjudication of 11.7.1996 – C-44/95, margin number 23, 26; adjudication of 28.6.2007 – C-235/04, margin number 23; adjudication of 13.7.2006 – C-191/05, margin number 9; adjudication of 11.7.1996 – C-334/04, margin number 24.

Articles 5–9 BD and Articles 12–16 HD, 1,200 species in the EU enjoy special levels of protection, including all European bird species. The aim of the Habitats Directive and the Birds Directive too is to maintain or restore a favourable conservation status for the specifically protected habitat types and species (Article s 2(2) and 3(1) HD, similar Articles 2 and 3(1) Birds Directive , cf. Article 2 no. 1 a) Environmental Liability Directive 2004/35/CE). In this process, the favourable conservation status is not limited to the Natura 2000 sites, but is to be achieved within the biogeographical region in question.

The Directives and the Natura 2000 sites are the most important instruments in achieving the biodiversity objectives of the CBD in the EU,[7] even though a favourable conservation status had only been attained for 16 percent of habitat types and 23 percent of species in the last reporting period (2007–2012).[8] On the one hand, the unfavourable conservation statuses are due to the fact that the great majority of Natura 2000 sites are not wild areas, but are frequently sites in historical landscapes or in the cultural landscapes of the present, such that there are a variety of conflicts in relation to land use, changes in land use and social development.[9] On the other hand, there are still significant deficiencies in the statutory implementation and the practical protection and management of the Natura 2000 sites in the individual Member States.[10]

In this process, the Natura 2000 appropriate assessment for impacting projects or plans under Article 6(3) HD is the central statutory instrument for the protection of the sites, in addition to the general prohibition of deterioration in Article 6(2) HD. The ECJ maximised the effectiveness of the assessment by its challenging legal interpretation.[11] Proposed inappropriate developments are essentially legally impermissible. According to Article 6(3) HD, the appropriate assessment must take place prior to the authorisation and implementation of a project or plan (*ex ante*).[12] However, in accordance with the European principle of proportionality[13] referred in Article 5(4) of the Treaty on European Union (TEU), the Habitats Directive does not wish to ban all human activity in Natura 2000 sites. This is why, on the one hand, only significant adverse impacts on the integrity of a Natura 2000 site are relevant and, on the other, according to Article 6(4) HD, a derogating authorisation is possible in favour of public interests.

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7 Milieu, IEEP and ICF 2016, p. 14 *et sqq*.

8 European Commission 2015b. *cf. Zehetmair* et al. Journal for Nature Conservation 2015, 53 *et sqq*.; *Hernando et al.* Biodiversity and Conservation 2010, 2221 *et sqq*.

9 EEA 2015, p. 135 *et sqq*.

10 EEA 2015, p. 130 *et sqq*.

11 *cf. Trouwborst* 2016, p. 219 (240).

12 ECJ, adjudication of 14.1.2010 – C-226/08, margin number 48 *et seq*.; adjudication of 24.11.2011 – C-404/09, margin number 125, 174.

13 *cf.* ECJ, adjudication of 14.4.2005 – C-441/03, margin number 27; BVerwG, adjudication of 23.4.2014 – 9 A 25.12, margin number 48; BVerwG, decision of 5.9.2012 – 7 B 24.12, margin number 7, 12.

The appropriate assessment requires comprehensive investigation and raises diverse legal and practical questions.[14] With the aid of a variety of guidance documents for the appropriate assessments in general and, more specifically, to ensure compatibility with diverse anthropogenic uses, the European Commission is attempting to support Member State obligations through standardisation.[15] The European Commission provided for an evaluation study to examine how the appropriate assessment is used in the Member States.

In this study, *Sundseth* and *Roth* conclude that some countries are more actively working on, and succeeding in, ensuring the full and efficient implementation of Article 6(3) HD, as opposed to countries where there are known to be systemic failings with implementation.[16] The majority of projects and plans within or in the vicinity of Natura 2000 sites were assessed as compatible in many Member States.[17] In addition to historical problems, the authors identified the following ongoing problems:

- Poor quality of the appropriate assessment undertaken,
- Lack of skills/ knowledge /capacity in the Article 6(3) HD procedure,
- An inadequate knowledge base on which to assess impacts,
- Inconsistent screening of plans and projects,
- Lack of understanding of key concepts and legal terms,
- Persistent lack of assessment of cumulative effects,
- Confusion with the Environmental Impact Assessment (EIA) / Strategic Environmental Assessment (SEA) procedure,
- Lack of early dialogue,
- Lack of effectiveness of appropriate assessments on plans and
- Problems during public consultation.[18]

A fundamental problem is that Member States have often organised the appropriate assessment as an integrated part of a specialised statutory authorisation procedure,[19] such that the responsible agency then undertakes the assessment.[20] In some cases, the appropriate assessment is carried out within the scope of a more general environmental impact assessment due to the EIA Directive 2011/92/EU[21]

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14 Milieu, IEEP and ICF 2016, p. 102 *et sqq.*; European Commission 2001; *Fretzer* Ecological Modelling 2016, 160 *et sqq.*; *Jackson* Journal of Environmental Law 2014, 495 *et sqq.*; *Ginige/Thornton/Ball* Journal of Water Law 2010, 66 *et sqq.*; *Peterson/Kose/Uustal* Journal of Environmental Assessment Policy and Management 2010, 185 *et sqq.*; *Söderman* Environmental Impact Assessment Review 2009, 79 *et sqq.*; *Palerm* European Environment 2006, 127 *et sqq.*; *Lawton* Journal of Water Law 2007, 47 *et sqq.*

15 can be accessed on http://ec.europa.eu/environment/nature/natura2000/management/guidance_en.htm

16 *Sundseth/Roth* 2013, p. 85 *et sqq.*

17 *Sundseth/Roth* 2013, p. 30 *et sqq.*

18 *Sundseth/Roth* 2013, p. 41 *et sqq.* cf. also Milieu, IEEP and ICF 2016, p. 104 *et sqq.*

19 for example, this applies in Germany.

20 *Sundseth/Roth* 2013, p. 19.

21 Directive on Environmental Impact Assessment for specific public and private projects adopted by the European Parliament and Council on 13.12.2011, OJEU no. L 26 of 28.1.2012, p. 1 *et sqq.*

and SEA Directive 2001/42/EEC [22].[23] In cases of a procedure that is integrated, the assessment, including the required investigations and evaluations, is generally not carried out by the Nature Conservation authorities that have greater specialist knowledge.[24] However, according to *Sundseth* and *Roth*, it is precisely the authorities without the necessary competence that are a big problem in relation to the effective implementation of Article 6(3) HD.[25] Nature Conservation authorities should therefore at least be involved in such procedures, if possible, in the form of reaching a consensual decision.

This article aims to introduce the steps and requirements of the appropriate assessment under Article 6(3) HD and to explore and, where necessary, provide a critical discussion of the decisions enacted by the European Court of Justice (ECJ) and the BVerwG, as well as of the European Commission guidelines. The *first step* in an appropriate assessment is the compulsory examination of whether an impact assessment is actually required (see 2.3). The prerequisite to this is a project or a plan that can be assessed within the meaning of Article 6(3) HD and does not serve the immediate purpose of management of the site. An impact assessment of a proposed development outside the boundaries of Natura 2000 sites may also be required as the potential consequences are decisive. Furthermore, a screening process must examine whether significant adverse impacts on the integrity of a Natura 2000 site are to be expected, i.e. cannot be excluded with certainty. In the event that all of these points apply, the *second step* involves the authorities assessing the compatibility of the project or plan (see 3) and, if appropriate, obtaining the opinion of the general public. Compatibility can only be ascertained, if concerns in relation to significant adverse impacts on the site can be ruled out without any reasonable doubt. This counter-evidence requires the authorities to consider the best relevant scientific knowledge in the field to enable them to determine without remaining reasonable scientific doubts that the plan or project will not have any permanent adverse impacts on the integrity of the site concerned. If this cannot be demonstrated, then the national authorities must not agree to the project or the plan owing to Article 6(3) HD. The proposed development can only be authorised through a *derogating approval*[26] in accordance with Article 6(4) HD. In the event that a project or plan is approved after its compatibility has been established or based on a derogating decision, the general prohibition of deterioration laid down in Article 6(2) HD nonetheless applies to its future realisation and operation.

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22 Directive on the assessment of the effects of certain plans and programmes on the environment adopted by the European Parliament and Council on 27.6.2001, OJEU no. L 197 of 21.7.2001, p. 30 *et sqq*.

23 recommending *Haumont* 2015, p. 93 (97 *et sqq.)*.

24 The BVerwG sees no problem here in relation to European Law (*cf.* BVerwG, adjudication of 10.4.2013 – 4 C 3.12, margin number 11).

25 *Sundseth/Roth* 2013, p. 52 *et seq*., 87, 92.

26 elaborately in *Möckel* Nature Conservation 2017b.

2. Requirement for an appropriate assessment

2.1. Spatial and temporal scope

The requirement for an appropriate assessment applies for each SCI within the meaning of Article 4 HD. In addition, appropriate assessments under Article 7 HD are also required for each SPA within the meaning of Article 4(1) and (2) BD. Both types of sites combine to form the Natura 2000 network and are also referred to overall as Natura 2000 sites (Article 3(1) HD). The requirement for an appropriate assessment is not limited to projects and plans that envisage proposed developments and measures within Natura 2000 sites, but also applies when proposed developments and measures will impact on a Natura 2000 site from outside its boundaries (e.g. because of emissions, barrier or other effects).[27] Which projects are obliged to undergo an assessment does not depend on the specific size of the radius, but on the habitat types and species that are protected, the kind of project and impact and on the attribution of effects over distance. Indirect and collateral effects of a proposed development are also relevant to the assessment, insofar as they can be attributed.[28] Because no evidence for causality is required in the appropriate assessment, the probability of significant adverse effects due to the proposed development is sufficient.[29]

2.1.1. SCI in the Habitats Directive

An appropriate assessment is to be undertaken in SCIs as required by Article 4(5) HD from the point onwards when the site concerned has been included in one of the European Commission biogeographical lists of sites in accordance with Article 4(2) third paragraph HD.[30] Protection at the national level under Article 4(4) HD is not required for applicability, such that any deficiencies in protection at the national level do not affect validity. No impact assessments are necessary in the case of sites that have just been reported by Member States or should have been reported (called potential SCIs), rather more, measures to safeguard the site must simply be

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27 ECJ, adjudication of 26.4.2017 – C-142/16, margin numbers 29 *et sqq.*, adjudication of 24.11.2011 – C-404/09, margin number 146 *et sqq.*, 166 *et sqq.*; BVerwG, adjudication of 14.4.2010 – 9 A 5.08, margin number 32–34; decision of 23.1.2015 – 7 VR 6.14, margin number 16; adjudication of 14.7.2011 – 9 A 12.10, margin number 93.

28 *cf.* e.g. BVerwG, adjudication of 9.7.2009 – 4 C 12.07, margin number 11.

29 *cf.* ECJ, adjudication of 10.11.2016 – C-504/14, margin number 29; ECJ, adjudication of 14.1.2016 – C-399/14, margin number 42; adjudication of 14.1.2016 – C-141/14, margin number 58; adjudication of 24.11.2011 – C-404/09 margin number 142.

30 ECJ, adjudication of 13.1.2005 – C-117/03 – *Dragaggi*, margin number 25; adjudication of 11.9.2012 – C-43/10 margin number and headnote 6.

taken.[31] However, the voluntary application of Article 6(3) HD is not prohibited and may be recommendable in individual cases.[32] A similar approach applies to sites under consultation within the meaning of Article 5 HD.

2.1.2. SPA in the Birds Directive

SPAs are selected and established solely by the Member States according to Article 4(1) and (2) BD. In accordance with Article 7 HD, the provisions in Article 6(2)-(4) HD only replace the demand for protection laid down in Article 4(4) BD as of the date on which the SPA in question is established in a legally binding manner as a special protection area.[33] The minimum requirement for this process is the precise specification of the boundaries of the site and the aims for conservation and protection.[34] In spite of the requirement for a formalised impact assessment, placement under protection constitutes an advantage for projects or plans that will have an adverse impact as, in contrast to Article 6(4) HD, Article 4(4) BD makes no exceptions in relation to the protective system.[35] However, protection as an SPA has no retrospective effect, as this contravenes both Article 7 HD and the enforcing nature granted by the ECJ[36] to Article 4(4) first sentence BD, whereby Member States are not permitted to gain any advantages from violation of their obligations in relation to designations under Article 4(1) and (2) BD.[37] Projects or plans that were approved or decided on prior to designation as an SPA can therefore not retrospectively invoke the later designation during court proceedings.

2.1.3. Projects and plans prior to listing or designation of a site

On principle, no subsequent appropriate assessment is to be carried out for projects and plans that had already been authorised prior to the listing of SCIs or prior to the

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31 ECJ, adjudication of 13.1.2005 – C-117/03, margin number 22 *et sqq.*; adjudication of 15.3.2012 – C-340/10, margin number 43–47; BVerwG, adjudication of 14.4.2010 – 9 A 5.08, margin number 34 *et sqq.*; decision of 22.6.2015 – 4 B 59/14, margin number 23.

32 BVerwG, decision of 7.9.2005 – 4 B 49.05, margin number 11.

33 ECJ, adjudication of 24.11.2011 – C-404/09, margin number 97; adjudication of 13.12.2007 – C-418/04, margin number 173 ; adjudication of 27.2.2003 – C-415/01, margin number 16 *et seq.*; adjudication of 6.3.2003 – C-240/00, margin number 19. Following BVerwG e.g., adjudication of 9.2.2017 – 7 A 2.15, margin number 215. More detailed to the requirements and consequences *Möckel* JEEPL 2014, 392 (400 *et sqq.*).

34 BVerwG, adjudication of 8.1.2014 – 9 A 4.13, headnote 5; adjudication of 1.4.2004 – 4 C 2.03, text number 3.2.

35 *cf.* ECJ, adjudication of 11.7.1996 – C-44/95, margin number 37; adjudication of 28.2.1991 – C-57/89, margin number 22–24; BVerwG, adjudication of 18.7.2013 – 4 CN 3.12, margin number 29 *et seq.*; *Möckel* JEEPL 2014, 392 (402 *et sqq.*, 405 *et sqq.*); Ureta JEEPL 2007, 84 (86).

36 ECJ, adjudication of 18.10.1989 – C-374/87, margin number 50–56.

37 BVerwG, adjudication of 18.7.2013 – 4 CN 3.12, margin number 28 *et sqq.*

designation of SPAs, even if the proposed development has not yet been realised.[38] However, the execution and operation of these proposed developments are subject to the protective effect of the prohibition of changes and disturbance in Article 6(2) HD.[39] Pursuant to the ECJ, this is designed to guarantee a similar level of protection to Article 6(3) HD,[40] which is why in cases where an appropriate assessment constitutes the sole suitable measure for the prevention of deterioration or disturbance caused by the execution of a proposed development, it must also be carried out within the scope of Article 6(2) HD.[41] This is the case, in particular, if a proposed development can only be realised or continue to exist based on the reasons for derogation stated in Article 6(4) HD,[42] as a full appropriate assessment is a compulsory condition for a derogation decision pursuant to settled ECJ case law.[43]

A subsequent appropriate assessment is also necessary if national law already requires a renewed authorisation assessment for an existing project or plan because, for example, significant changes are to be made or the earlier approval was issued for a limited period.[44] This also applies to replacement constructions, e.g. the construction of a new wind power plant or a bridge, if an authorisation procedure is required for this pursuant to national legislation. Even recurrent measures are to be subjected to an appropriate assessment on principle, unless they can be classified as a cohesive project.[45]

2.2. Plans and projects

Article 6(3) HD refers to plans and projects without the Habitats Directive defining these terms in greater detail. According to Article 6(3) HD, only projects and plans that are directly connected with or necessary to the management of the site require no appropriate assessment. As a derogation provision, the scope for such associated management developments is to be narrowly defined and is only applicable if such developments are intended to promote the relevant conservation objectives in the site within the meaning

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38 *cf.* only ECJ, adjudication of 14.1.2016 – C-399/14, margin number 33.

39 ECJ, adjudication of 14.1.2016 – C-399/14, margin number 33; adjudication of 24.11.2011 – C-404/09, margin number 124 *et seq.*; adjudication of 14.1.2010 – C-226/08, margin number 49.

40 settled ECJ case law, adjudication of 14.1.2016 – C-399/14, margin number 52; adjudication of 15.5.2014 – C-521/12, margin number 19.

41 ECJ, adjudication of 14.1.2016 – C-399/14, margin number 42–46.

42 ECJ, adjudication of 14.1.2016 – C-399/14, margin number 54 *et sqq.* and headnote 1; adjudication of 10.11.2016 – C-504/14, margin number 41.

43 settled ECJ case law, adjudication of 14.1.2016 – C-399/14, margin number 56 *et seq.*; adjudication of 15.5.2014 – C-521/12, margin number 36; adjudication of 11.4.2014 – C-258/11, margin number 35; adjudication of 16.2.2001 – C-182/10, margin number 74 *et seq.*

44 *cf.* ECJ, adjudication of 14.1.2016 – C-399/14, margin number 76; adjudication of 14.1.2010 – C-226/08, margin number 41–46; adjudication of 7.9.2004 – C-127/02, margin number 28 *et seq.*

45 *Möckel* Nature Conservation 2017c.

of Article 6(1) HD.[46] All other projects and plans are inherently obliged to undergo an assessment, irrespective of whether they are being instigated by a governmental authority, a company or a citizen. Even projects and plans put forward by the legislature are not exempt from the protective system and are also to be assessed.[47]

2.2.1. Projects[48]

The ECJ refers to the term project in Article 1(2) a) of the EIA Directive for its interpretation of the term and takes a broad view on what projects are. The term includes not only building installations, but also all human interventions in nature and the landscape, in accordance with the second amendment to the EIA Directive.[49] It is therefore not the kind of proposed development that is decisive, but simply the potential effects on Natura 2000 sites, which is why an appropriate assessment is also necessary for activities that are not intrinsically associated with physical change.[50] Furthermore, an appropriate assessment is not limited to proposed developments for which an obligation for approval or of disclosure is planned by national rules of procedure.[51] The ECJ has taken clear action against[52] any attempts by Member States[53] to extend the scope of the term project and to thereby limit the applicability of the appropriate assessment through a statutory exemption for specific interventions and types of proposed development. An exemption is only permissible in exceptional cases where the criteria for exemption can guarantee that the possibility of a significant adverse impact on the protected areas due to the projects in question is ruled out.[54]

This is why still an assessment may be required for agricultural, forestry and fishery measures that are generally not subject to approval, if they take place in the vicinity of

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46 ECJ, adjudication of 4.3.2010 – C-241/08, margin number 50–56.

47 ECJ, adjudication of 16.2.2012 – C-182/10, margin number 69.

48 More detailed to the project term *Möckel* Nature Conservation 2017c.

49 settled ECJ case law, adjudication of 14.1.2010 C-226/08, margin number 38; adjudication of 7.9.2004 – C-127/02, margin number 24 *et sqq.*; adjudication of 10.1.2006 – C-98/03, margin number 40 *et seq.* Subsequent BVerwG, adjudication of 10.4.2013 – 4 C 3.12, margin number 29; adjudication of 12.11.2014 – 4 C 34.13, margin number 29; decision of 11.5.2014 – 7 B 18.14, margin number 24.

50 settled BVerwG case law, adjudication of 12.11.2014 – 4 C 34.13, margin number 29; adjudication of 19.12.2013 – 4 C 14.12, margin number 28; decision of 18.5.2004 – 7 B 18.04, margin number 24. *cf.* ECJ, adjudication of 10.1.2006 – C-98/03, margin number 40 *et seq.*

51 ECJ, adjudication of 14.1.2016 – C-399/14, margin number 68 *et seq.*; adjudication of 10.1.2006 – C-98/03, margin number 40 *et sqq.*

52 ECJ, adjudication of 26.5.2011 – C-538/09, margin number 45.

53 e.g. so Germany with the Federal Nature Conservation Act between 2002–2007.

54 ECJ, adjudication of 10.1.2006 – C-98/03, margin number 41; adjudication of 26.5.2011 – C-538/09, margin number 41 *et sqq.*

Natura 2000 sites.[55] Significant adverse impacts may be present, especially in cases of agricultural, forestry or fishery measures that are not commonplace, such as clearing woodland, the use of plant protection agents in forests, creation of an aquaculture, ploughing of a permanent green area, resumption of extensive exploitation that had been given up or its intensification.[56] At minimum, a specific obligation of disclosure is required in relation to Natura 2000 to ensure that the responsible authorities have the power to assess the compatibility of all relevant projects in cases of proposed developments that do not inherently require approval or disclosure.[57]

2.2.2. Plans

In contrast to the term project, the ECJ has not yet clarified whether recourse can and should be taken to the definitions of terms used in the European directives on environmental impact assessments, as is the case for the term project. Article 2 a) SEA Directive covers plans that are devised or accepted by national, regional or local authorities (including statutory master plans) and must be compiled due to statutory or administrative provisions. Similar requirements are also to be assumed for Article 6(3) HD as only governmental plans with externally binding or official internal legal effects can predetermine an adverse impact on a Natura 2000 site by a project in a legally relevant manner. The ECJ has made clear that plans and projects devised by legislative bodies are also subject to the obligations given in Article 6(3) HD, as was already mentioned at the start.

2.3. Preliminary assessment (Screening)

An appropriate assessment is only to be carried out if there is the likelihood or threat that a plan or project, either alone or in combination with other projects and plans, will have a significant adverse impact on the integrity of the site concerned, as the conduct of an appropriate assessment involves a substantial amount of work and expense and is associated with

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55 on land uses that define a site, such as hunting: ECJ, adjudication of 4.3.2010 – C-241/08, margin number 39, 56; on mechanical shell fishing: ECJ, adjudication of 7.9.2004 – C-127/02, margin number 27, NuR 2004, 788 *et sqq.*; on the intensification of land use, drainage and consolidation of agricultural land ECJ, adjudication of 25.11.1999 – C-96/98, margin number 29, 45 *et seq.*; on irrigation ECJ, adjudication of 18.12.2007 – C-186/06, margin number 26 *et sqq.* and on overgrazing ECJ, adjudication of 13.6.2002 – C-117/00, margin number 22–33. Also European Commission 2015a, p. 55 *et sqq.*; European Commission 2012b, p. 45 *et sqq.*; European Commission 2014, p. 29 *et seq.*

56 *cf.* European Commission 2015a, p. 61 *et seq.*, 66 *et sqq.*, 76 *et sqq.*; European Commission 2012b, p. 45 *et sqq.*

57 *cf.* § 34(6) Federal Nature Conservation Act in Germany.

delays to projects.[58] No appropriate assessment is required if this can clearly be ruled out, i.e. without reasonable doubt and relevant uncertainties, by a screening process.[59] The summary appraisal of a potential threat is to be undertaken based on objective circumstances and under consideration of the specific characteristics and environmental conditions of the Natura 2000 site concerned.[60] However, there is no obligation to carry out an assessment based on purely theoretical concerns.[61] Conversely, potential thresholds related to bagatelles and irrelevance or mitigation measures[62] are not permitted to already be included in the screening in support of the proposed development.[63] The recognition of such thresholds or measures requires precisely determined adverse impacts, that are only to be ascertained and evaluated in the main assessment as, on principle, any exceeding of the thresholds for reaction and load is significant.

3. Appropriate assessment

3.1. Basic requirement

In recognition of the precautionary principle[64] required under Article 191(2) of the Treaty on the Functioning of the European Union (TFEU) and the importance of the Natura 2000 sites as common European heritage,[65] settled ECJ case law has established

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58 ECJ, adjudication of 7.9.2004 – C-127/02, margin number 43 *et seq.*; adjudication of 26.5.2011 – C-538/09, margin number 39; adjudication of 21.7.2011 – C-2/10, margin number 41 *et seq.*; BVerwG, adjudication of 10.4.2013 – 4 C 3.12, margin number 10. A detailed description made European Commission 2001, p. 17 et sqq. and e.g. *Peterson/Kose/Uustal* Journal of Environmental Assessment Policy and Management 2010, 185 (190 *et sqq.*).

59 *cf.* BVerwG, adjudication of 29.9.2011 – 7 C 21.09, margin number 40; adjudication of 18.12.2014 – 4 C 35.13, margin number 33; decision of 13.8.2010 – 4 BN 6.10, margin number 4; adjudication of 17.1.2007 – 9 A 20.05, margin number 60; *Peterson/Kose/Uustal* Journal of Environmental Assessment Policy and Management 2010, 185 (197).

60 ECJ, adjudication of 7.9.2004 – C-127/02, margin number 44, 49; adjudication of 26.5.2011 – C-538/09, margin number 39; BVerwG, adjudication of 18.12.2014 – 4 C 35.13, margin number 33, 48; adjudication of 17.1.2007 – 9 A 20.05, margin number 61.

61 BVerwG, adjudication of 17.1.2007 – 9 A 20.05, margin number 60.

62 Due to the European Commission mitigation measures are an integral part of the specifications of a plan or project and aimed at minimising or even cancelling the negative impact of a plan or project, during or after its completion (European Commission 2000, p. 37).

63 European Commission 2001, p. 14; *Peterson/Kose/Uustal* Journal of Environmental Assessment Policy and Management 2010, 185 (196 *et seq.*); *Gellermann*, in: Landmann/Rohmer, Umweltrecht, 2016, § 34 BNatSchG margin number 11 *et seq.* Different view BVerwG, adjudication of 12.3.2008 – 9 A 3.06, margin number 124; *Lambrecht/Trautner* 2007, p. 68 *et sqq.*; *Wulfert et al.* 2015, p. 44 *et sqq*; *cf.* for UK *Therivel* Environmental Impact Assessment Review 2009, 261 (269 *et seq.*).

64 ECJ, adjudication of 26.5.2011 – C-538/09, margin number 39; adjudication of 15.5.2014 – C-521/12, margin number 26; adjudication of 7.9.2004 – C-127/02, margin number 44, 58.

65 ECJ, adjudication of 28.6.2007 – C-235/04, margin number 23; adjudication of 13.7.2006 – C-191/05, margin number 9.

basic requirements for the compatibility of a project or plan under Article 6(3) HD.[66] In the judgement Sweetman and Others the ECJ had brought his requirements to a good scheme.[67] The main statements are:

40 Authorisation for a plan or project, as referred to in Article 6(3) of the Habitats Directive, may therefore be given only on condition that the competent authorities – once all aspects of the plan or project have been identified which can, by themselves or in combination with other plans or projects, affect the conservation objectives of the site concerned, and in the light of the best scientific knowledge in the field – are certain that the plan or project will not have lasting adverse effects on the integrity of that site. That is so where no reasonable scientific doubt remains as to the absence of such effects (see, to this effect, Case C-404/09 Commission v Spain, paragraph 99, and Solvay and Others, paragraph 67).

41 It is to be noted that, since the authority must refuse to authorise the plan or project being considered where uncertainty remains as to the absence of adverse effects on the integrity of the site, the authorisation criterion laid down in the second sentence of Article 6(3) of the Habitats Directive integrates the precautionary principle and makes it possible to prevent in an effective manner adverse effects on the integrity of protected sites as a result of the plans or projects being considered. A less stringent authorisation criterion than that in question could not ensure as effectively the fulfilment of the objective of site protection intended under that provision (Waddenvereniging and Vogelbeschermingsvereniging, paragraphs 57 and 58).

The required certainty must be based on objective circumstances and on the best relevant scientific knowledge in the field in relation to the exclusion of significant adverse impacts on the integrity of Natura 2000 sites[68]. This means that any remaining reasonable doubt counts against the proposed development (see 3.3.2). In accordance with the ECJ, an appropriate assessment that has been carried out based on these standards shall not be fragmentary and must contain complete, precise and conclusive findings that are suited to the exclusion of any reasonable scientific doubt in relation to the effects of the planned proposed development on the site.[69] In the event that no evidence to the contrary can be provided, showing that significant adverse impacts on the site can be excluded if the project is realised, the proposed development is prohibited on principle and the responsible national authority may only approve it under the conditions laid down in Article 6(4) HD.[70] Adherence to all requirements during the

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66 ECJ, adjudication of 26.4.2017 – C-142/16, margin numbers 33; adjudication of 14.1.2016 – C-399/14, margin number 43 *et seq.*, 48 *et seq.*; adjudication of 15.5.2014 – C-521/12, margin number 20 *et seq.*; adjudication of 11.9.2012 – C-43/10, margin number 111 *et sqq.*; adjudication of 7.9.2004 – C-127/02, margin number 41–49, 56–59.

67 ECJ, adjudication of 11.4.2013 – C-258/11, margin number 40 *et seq.*

68 ECJ, decision of 19.1.2012 – C-117/11, margin number 24. Critical to these scientific approach of dealing with uncertainties *Opdam/Broekmeyer/Kistenkas* EnvSci 2009, 912 et sqq.; Floor/van Koppen/van Tatenhove EnvSci 2016, 380 (390 et seq.).

69 ECJ, adjudication of 24.11.2011 – C-404/09, margin number 100; adjudication of 11.4.2013 – C-258/11, margin number 44; adjudication of 15.5.2014 – C-521/12, margin number 27; adjudication of 14.1.2016 – C-399/14, margin number 50.

70 ECJ, adjudication of 11.4.2013 – C-258/11, margin number 46 *et seq.*

examination by the authorities is to be assessed in full by the national courts in the case of a lawsuit.[71] Overall, the investigation will go into substantially greater detail than environmental impact assessments made under the EIA Directive and the SEA Directive. However, project alternatives are officially to be considered in the derogation assessment,[72] even if in practice the examination of alternative solutions by project or plan proponents may be the first phase of the process.[73]

Within the scope of its comprehensive case law, the BVerwG[74] has amended these requirements in relation to some methodological perspectives (see 3.3) and material aspects.

3.2. Timing of the assessment

On principle, the facts of the case that pertained at the time of issuing the decision for authorisation for a project or the resolution on a plan are to form the basis for the screening and the appropriate assessment.[75] However, the potential future effects of the project or plan on the conservation objectives for the affected Natura 2000 site are to be forecast based on these facts of the case. The decision on whether significant adverse impacts are to be expected or can be excluded without remaining reasonable scientific doubts is thus essentially based on a hypothetical assumption. This is associated with uncertainties, as is the case for all forecasts, the magnitudes of which increase, the higher the range of the temporal scope of the forecast, the greater the complexity of the effects of the project or plan, and the lower the available knowledge on the affected habitat types, species and on the effects that are to be expected.

3.3. Methodological questions

Article 6(3) HD does not specify methods for data collection or analysis for the conduct of the appropriate assessment.[76] Nevertheless, the certainty demanded by the ECJ with reference to the exclusion of significant adverse impacts requires a high methodological standard of investigation.

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71 ECJ, adjudication of 11.4.2013 – C-258/11, margin number 44.

72 ECJ, adjudication of 4.3.2010 – C-241/08, margin number 69.

73 European Commission 2001, p. 13 et seq.

74 settled case law e.g. BVerwG, adjudication of 17.1.2007 – 9 A 20.05, headnote 10–12; adjudication of 12.3.2008 – 9 A 3.06, margin number 67; adjudication of 10.4.2013 – 4 C 3.12, margin number 10.

75 *cf.* ECJ, adjudication of 14.1.2016 – C-399/14, margin number 60 *et seq.*; BVerwG, decision of 6.6.2012 – 7 B 68.11, margin number 9; adjudication of 18.7.2013 – 4 CN 3.12, margin number 33.

76 BVerwG, adjudication of 23.4.2014 – 9 A 25.12, margin number 26; ECJ, adjudication of 11.9.2012 – C-43/10, margin number 111; adjudication of 7.9.2004 – C-127/02, margin number 52.

3.3.1. Risk analysis, risk forecasting and risk assessment based on the best scientific knowledge in the field

According to the BVerwG, a specialist scientific consultation on the risk analysis, risk forecasting and risk assessment forms the formal core of the appropriate assessment.[77] The reason for this is that an individual case evaluation that is essentially dependent on specialist conservation findings and assessments is required to judge whether a project might have significant adverse impacts on the integrity of an SCI or SPA.[78] This must be based on the current state of scientific debate and the best relevant scientific knowledge in the field, including generally recognised empirical propositions and methods of investigation.[79] The specialist scientific insights that are gained are to be documented, as this is the only way whereby evidence can be provided showing that the accessible scientific knowledge resources were exploited in full and the assessments have complied with the best possible scientific standards.[80] Not only the European Commission has produced guidance[81] to simplify the process of determining the most important current scientific knowledge in each individual case, but the authorities in Germany have also compiled specialist scientific conventions and produced working aids on specific questions related to the appropriate assessment[82] that have been recognised by the BVerwG as important tools for reaching decisions in administrative and court proceedings.[83] Nevertheless, the standards specified there – e.g. information on non-significant losses of area or irrelevant pollutants – are only guideline values that claim no normative legitimacy and permit derogation in individual cases.[84] Furthermore, it must be noted that habitat types, species and natural environmental conditions, as well as scientific insights, generally recognised empirical propositions and methods continue to develop over time, which is why specialist conventions and working aids require constant updating.[85] Failing this, the

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77 BVerwG, adjudication of 17.1.2007 – 9 A 20.05, margin number 68 and headnote 12.

78 settled case law BVerwG, decision of 7.2.2011 – 4 B 48.10, margin number 6; adjudication of 12.3.2008 - 9 A 3.06, margin number 68 and adjudication of 17.1.2007 – 9 A 20.05, margin number 43.

79 settled case law ECJ, adjudication of 11.9.2012 – C-43/10, margin number 113; adjudication of 26.10.2006 – C-239/04, margin number 20; BVerwG, adjudication of 23.4.2014 – 9 A 25.12, margin number 48; adjudication of 17.1.2007 – 9 A 20.05, margin number 66 and headnote 9.

80 BVerwG, adjudication of 10.4.2014 – 4 C 3.12, margin number 20; adjudication of 17.1.2007 – 9 A 20.05, margin number 70 and headnote 13.

81 see http://ec.europa.eu/environment/nature/natura2000/management/guidance_en.htm.

82 *cf. Wulfert et al.* 2015; *Lambrecht/Trautner* 2007; *Balla et al.* 2013. The Federal Agency for Nature conservation (BfN) set up a specialist online information system for impact assessments in SCIs in 2014 (http://ffh-vp-info.de/FFHVP/Page.jsp).

83 cf. BVerwG, adjudication of 23.4.2014 – 9 A 25.12, margin number 37; adjudication of 12.3.2008 – 9 A 3.06, margin number 125.

84 settled case law BVerwG, adjudication of 23.4.2014 – 9 A 25.12, margin number 66; adjudication of 6.11.2012 – 9 A 17.11, margin number 46 *et seq.*; adjudication of 12.3.2008 – 9 A 3.06, margin number 125–132.

85 *cf. Wulfert et al.* 2015, p. 47.

responsible authorities are under the obligation to examine whether these actually still represent the best state of scientific knowledge in individual cases.

The required investigations in the Natura 2000 site concerned must consist of concrete observations, based on these scientific insights, empirical propositions and methods.[86] The investigations must be thorough and permit precise and conclusive findings.[87] The concrete findings are to be documented.[88] Older data may only be referred to if the natural and spatial features of the Natura 2000 site have remained largely unchanged[89] or if these are more likely to result in an overestimate of the pressures on the site than in an underestimate, due to regressive trends in the impact of these pressures.[90] The BVerwG awards to the authorities a subject-specific appraisal prerogative if multiple procedures for determination and assessment are recognised that use different methods and criteria for investigation.[91] Whereas methods that are regarded as obsolete by the scientific field are prohibited, this must not simply be assumed to be the case if a different method that is recognised would yield results that are not in full agreement.[92]

However, the state of scientific debate and knowledge in relation to the impacts of diverse proposed developments on habitat types and species is often fluid, and generally accepted specialist scientific empirical propositions are not necessarily available.[93] This means there is a lack of the necessary certainty if the risk analysis, risk forecasting and risk assessment do not consider the best state of scientific knowledge or if, from an objective perspective, the relevant scientific knowledge in the field are insufficient at the time to exclude, without reasonable doubt, the possibility that significant adverse impacts will not occur.[94]

However, the BVerwG also sees limits in relation to the obligations for investigation:

The precautionary principle under European Community Law demands that existing scientific uncertainties shall be reduced to a minimum, if feasible (…). This requires the exploitation of all scientific means and resources (…), but does not mean that research is to be commissioned within the scope of a Habitats Directive impact assessment to address gaps in knowledge and methodological uncertainties within the scientific field. Rather more, Article 6(3) HD demands the use of the 'best available scientific means' (…). In this case, the recognised scientific meth-

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86 BVerwG, adjudication of 17.1.2007 – 9 A 20.05, margin number 68.

87 settled case law ECJ *cf.* footnote 69. Subsequent BVerwG, adjudication of 23.4.2014 – 9 A 25.12, margin number 48.

88 BVerwG, adjudication of 10.4.2014 – 4 C 3.12, margin number 20; adjudication of 17.1.2007 – 9 A 20.05, margin number 70 and headnote 13.

89 BVerwG, adjudication of 23.4.2014 – 9 A 25.12, margin number 63.

90 BVerwG, adjudication of 14.7.2011 – 9 A 12.10, margin number 76.

91 BVerwG, adjudication of 12.3.2008 – 9 A 3.06, margin number 73–75; adjudication of 14.7.2011 – 9 A 12.10, margin number 62.

92 BVerwG, adjudication of 23.4.2014 – 9 A 25.12, margin number 26; adjudication of 12.3.2008 – 9 A 3.06, margin number 73.

93 BVerwG, decision of 7.2.2011 – 4 B 48.10, margin number 5. *Floor/van Koppen/van Tatenhove* EnvSci 2016, *380 et sqq*. More detailed, when also for conservation of species: BVerwG, adjudication of 9.7.2008 – 9 A 14.07, margin number 64 *et sqq*.

94 BVerwG, decision of 7.2.2011 – 4 B 48.10, margin number 5.

odology includes highlighting the gaps in scientific knowledge that cannot be addressed within a suitable timeframe and estimating their relevance to the findings (cf. Guideline on Habitats Directive Impact Assessment, p. 31). This risk assessment can fulfil the function of developing proposals for effective risk management during the course of the Habitats Directive impact assessment, namely, to determine which measures are appropriate and required to prevent the risk from becoming reality (cf. ECJ, adjudication of 11 September 2002 – T-13/99 – Summary of Decisions 2002, II-3305, margin number 163). In this process, insofar as monitoring appears to be necessary, the environmental management systems standard is to be adhered to (…).[95]

3.3.2. Handling of uncertainties related to estimates and forecasting

Uncertainties in forecasting and estimating the potential effects and their significance count against the project due to the requirement for certitude.[96] This handling of uncertainties in relation to forecasting is significantly stricter, than the requirements of the high courts in relation to other decisions on forecasting, at least in Germany, which must only be examined to ascertain whether they were processed using flawless methodology, are not based on unrealistic assumptions and justify the outcome of forecasting in a comprehensible manner,[97] whereby tenable alternative estimates are no reason for an objection.[98]

It is therefore no surprise that the BVerwG mitigates the strict demands of the ECJ in relation to certitude in cases of scientific uncertainties relating to, for example, interactions that cannot be addressed at the time. The BVerwG therefore states that it is permissible to work with forecasting probabilities and estimates which must, however, be identified and justified.[99] Conclusions by analogy, presumptions of truth and worst case scenarios are essentially also valid tools, so long as the outcomes achieved through these tools err on the "safe side" with reference to the problems under investigation, they document the crucial facts of the case in a pertinent manner and permit a differentiated conservation concept.[100] For the BVerwG and the Netherlands Superior Ad-

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95 BVerwG, adjudication of 17.1.2007 – 9 A 20.05, margin number 66.

96 explicitly, ECJ, adjudication of 11.9.2012 – C-43/10, margin number 112. *cf. Sobotta* Journal for Nature Conservation 2017, in press; *Floor/van Koppen/van Tatenhove* EnvSci 2016, 380 *et sqq.* to the debate and the court decisions to mussel seed fishery in the Netherlands, which results from the ECJ, adjudication of 7.9.2004 – C-127/02.

97 e.g. BVerwG, adjudication of 9.6.2010 – 9 A 20.08, margin number 73; adjudication of 27.10.1998 – 11 A 1.97, BVerwGE 107, p. 313 (326). *cf.* for other countries *Opdam/Broekmeyer/Kistenkas* EnvSci 2009, 912 *et sqq.*

98 BVerwG, adjudication of 27.11.1996 – 11 A 99.95, JURIS, margin number 29; adjudication of 20.4.2005 – 4 C 18.03, text number 2.4.

99 BVerwG, adjudication of 28.3.2013 – 9 A 22.11, margin number 41.

100 settled case law BVerwG, adjudication of 6.11.2013 – 9 A 14.12, margin number 51; adjudication of 14.7.2011 – 9 A 12.10, margin number 71; adjudication of 17.1.2007 – 9 A 20.05, margin number 64. *cf.* also the advanced standards for conclusions by analogy of the VGH Kassel, adjudication of 21.8.2009 – 11 C 318/08.T, margin number 243, which the BVerwG has, however, left open (BVerwG, decision of 14.4.2011 – 4 B 77.09, margin number 14, 19 *et seq.*)

ministrative Court gaps in knowledge are essentially not an obstacle to authorisation that cannot be overcome if the conservation concept includes plans for effective risk management with appropriate monitoring.[101] But in a current adjudication the ECJ was very sceptical in respect of taking into account a following risk management with a multi-phase monitoring.[102] So uncertainties that cannot be cleared up result in the inadmissibility of the proposed development so long as no derogating authorisation is possible under Article 6(4) HD.

3.3.3. Steps in the investigation

The following individual steps in the investigation are necessary for the appropriate assessment:

1. The concrete conservation objectives and relevant objects for assessment in the affected site are to be determined and located as closely as possible based on the declaration on the protected site, Standard Data Forms and management plans (see 3.4).
2. The abundance and condition of protected habitat types in the site, including its typical species, and of the protected species, are to be determined with a survey that is based on current and reliable data[103] (see 3.5).
3. All possible consequences of the project, individually or in combination with other plans or projects, that might have an adverse impact on the conservation objectives for the site concerned are to be determined and identified (see 3.6).
4. Estimates are to be provided on the extent to which these effects could impact on the protected habitat types and species and whether these could be so negative that the conservation objectives might no longer be achieved in full in the site (see 3.7). In this process, mitigation measures may also be considered in a limited fashion.[104]

3.4. Conservation objectives and relevant items for protection

Article 6(3) HD requires the effects of a proposed development on the integrity of a Natura 2000 site to be assessed in relation to their compatibility with the concrete conservation objectives for the site concerned.[105] The conservation objectives defined

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101 settled case law BVerwG, adjudication of 6.11.2013 – 9 A 14.12, margin number 56; adjudication of 12.3.2008 – 9 A 3.06, margin number 105; adjudication of 17.1.2007 – 9 A 20.05, margin numbers 64, 66, 53 and headnote 11. Netherlands Superior Administrative Court (Raad van State), adjudication of 29.8.2007 – 200606028. These suggest also e.g. *McGillivray* JEEPL 2011, 329 (349 *et sqq.*); *Floor/van Koppen/van Tatenhove* EnvSci 2016, 380 (383); *Opdam/Broekmeyer/Kistenkas* EnvSci 2009, 912 (919 *et seq.*).

102 ECJ, adjudication of 26.4.2017 – C-142/16, margin number 39–44.

103 ECJ, adjudication of 11.9.2012 – C-43/10, margin number 115.

104 see *Möckel* Nature Conservation 2017a.

105 ECJ, adjudication of 13.12.2007 – C-418/04, margin number 243.

for each Natura 2000 site therefore constitute both the item for protection and also set the standard for the assessment.[106] The focus of the conservation objectives are the habitat types listed in Annex I HD and the species listed in Annex II HD, as well as bird species listed in Annex I BD and migratory bird species, based on which the site has been selected. A favourable conservation status is to be safeguarded or restored for these habitat types and species (Article 2(2), 3(1) HD and Articles 2, 3(1) Birds Directive). The Member States first specify which habitat types and species this pertains to for the SCIs in the Standard Data Forms and these are then sent to the European Commission.[107] This is followed later on by a binding specification within the scope of the statutory designation of the protected area. These specifications made in the statutory designation of the protected area precede the Standard Data Forms, which are to be updated accordingly.[108] In the absence of a report, the conservation aims for SPAs are first specified in the statutory designation of the protected area. According to the BVerwG, habitat types and species that are not named in the declaration on the protected area or in the standard datasheet shall not be objects of the assessment, even if these are priority habitat types or species.[109] The Court holds that, in the case of SPAs, only an (appropriate) selection of European bird species from Annex I BD, corresponding to the reporting and site designation procedure, shall form the basis for the assessment.[110] All habitat types that may develop only in the future or species that may migrate into the area are not considered at all in the appropriate assessment.[111]

Based on Article 1 e) HD, the typical species in an affected habitat type are also relevant to the assessment, independent of whether they are named in the declaration on the protected area or in the standard datasheet.[112] However, the BVerwG has decided that not all characteristic species require inclusion in the appropriate assessment:[113]

Those characteristic species shall be selected that exhibit a clear high abundance in the habitat type in question or the conservation of their populations must be directly linked to the conservation of the habitat type in question. The species must be relevant to the recognition and evaluation of adverse impacts, i.e. species shall be selected that possess an indicator function for potential effects of the proposed development on the habitat type.[114]

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106 BVerwG, adjudication of 17.1.2007 – 9 A 20.05, margin number 68.

107 *cf.* European Commission 2011.

108 European Commission 2011, p. 39 (whereas no. 4).

109 BVerwG, decision of 14.4.2011 – 4 B 77.09, margin number 36–39; adjudication of 17.1.2007 – 9 A 20.05, margin number 77 and headnote 14.

110 BVerwG, adjudication of 3.5.2013 – 9 A 16.12, margin number 50.

111 *cf.* BVerwG, adjudication of 3.5.2013 – 9 A 16.12, margin number 45.

112 BVerwG, adjudication of 28.3.2013 – 9 A 22.11, margin number 82; adjudication of 12.3.2008 – 9 A 3.06, margin number 79.

113 BVerwG, adjudication of 23.4.2014 – 9 A 25.12, margin number 50; adjudication of 28.3.2013 – 9 A 22.11, margin number 80; adjudication of 6.11.2012 – 9 A 17.11, margin number 52.

114 BVerwG, adjudication of 6.11.2012 – 9 A 17.11, margin number 52. Similar, e.g., to BVerwG, adjudication of 10.11.2016 – 9 A 18.15, margin number 71; adjudication of 28.3.2013 – 9 A 22.11, margin number 80; adjudication of 6.11.2013 – 9 A 14.12, margin number 54.

The responsible authority is given some discretionary power in the selection of species.[115] Species that react particularly sensitively (e.g. acoustic or optical sensitivity to disturbance) to the effects of a project, or have high or very specific requirements of their habitat, are primarily of relevance, which is why the effects on the habitat type caused by the proposed development would not be adequately documented without their inclusion.[116] Species that are higher up in the food chain can be used to make inferences on species that are lower down in the food chain and indirect estimates, based on bat and bird species, of the effects on, e.g., characteristic species of beetles, other insects or snails are therefore permissible according to the BVerwG.[117] In practice, investigations in Germany are limited to a small number of species on a regular basis.[118] The selected characteristic species are to be treated like species in Annex II HD in the further assessment.[119]

In individual cases, in addition to the conservation objectives, other elements of the site are to be included in the assessment if these are essential to a favourable conservation status due to the ecological structure and relationships (e.g. margins and buffer zones or species that are an indispensable food resource for the protected species).[120]

3.5. Surveys and evaluation of abundance and condition of the protected habitat types and species

In order to be in a position to estimate the effects of a proposed development on the conservation objectives, the abundance and condition of the protected habitat types and species must be surveyed and evaluated. This also includes determining previous pressures on the site due to existing anthropogenic exploitation or long-range pollution, as well as natural changes, e.g. in the climate or water balance.[121] The survey and evaluation methods must be based on the best relevant scientific knowledge in the field (see 3.3.1). The evaluation is to be carried out based on reliable and current data.[122] According to

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115 BVerwG, adjudication of 23.4.2014 – 9 A 25.12, margin number 50; adjudication of 12.3.2008 – 9 A 3.06, margin number 78.

116 BVerwG, adjudication of 28.3.2013 – 9 A 22.11, margin number 81; adjudication of 23.4.2014 – 9 A 25.12, margin number 51.

117 BVerwG, adjudication of 6.11.2012 – 9 A 17.11, margin number 53.

118 *cf.* BVerwG, adjudication of 28.3.2013 – 9 A 22.11, margin number 81; adjudication of 23.4.2014 – 9 A 25.12, margin number 51; adjudication of 13.5.2009 – 9 A 73.07, margin number 47; *Trautner* NuR 2010, 90, 92 *et sqq.*

119 BVerwG, adjudication of 6.11.2012 – 9 A 17.11, margin number 52; adjudication of 12.3.2008 – 9 A 3.06, margin number 79–82.

120 BVerwG, adjudication of 17.1.2007 – 9 A 20.05, margin number 77; adjudication of 18.7.2013 – 4 CN 3.12, margin number 30.

121 *cf.* BVerwG, adjudication of 14.4.2010 – 9 A 5.08, margin number 88; decision of 10.11.2009 – 9 B 28.09, margin number 3.

122 ECJ, adjudication of 11.9.2012 – C-43/10, margin number 115.

the BVerwG, older data may only be referred to if the natural and spatial features of the Natura 2000 site have remained largely unchanged and current data are being collected in the immediate area of intervention due to the proposed development.[123]

With regard to the extent of the data collection and the method, the BVerwG approves a conservation-specific discretion for estimation,[124] which must, however, be limited to the choice of method and the selection of the characteristic species.[125] The data collection and evaluation must adhere to the statutory criteria, in particular those laid down in Article 1 e) and i) HD and Annex III Stage 1 HD.[126] For example, threats that are already present – e.g. due to the influx of nutrients or pesticides – do not justify the classification of a habitat type as an area for development that is worthy of lesser protection if, nevertheless, all characteristics that shape the type of habitat are present.[127] Furthermore, regular investigations on location cannot be dispensed with.[128] In addition, a mixture of different data collection methods may be necessary[129] to obtain a realistic picture of the numbers and condition of the protected species and their habitats.[130] Habitats used for reproduction and resting, as well as for feeding, including habitats only frequented at certain times of the year (e.g. overwintering quarters), and also the main paths and routes between these habitats are to be identified for mobile species of animals and their importance to the species is to be estimated.[131] The investigations must not disturb the affected animals themselves in a disproportionate manner.[132] They are to be limited to the required scope and are only to be carried out by experts, exerting the greatest possible level of care in relation to the affected specimens (especially their physical integrity) and the remaining animal and plant life.[133]

Deficiencies in surveys or in the evaluation of abundance and condition basically render the entire appropriate assessment defective.[134] However, the BVerwG has decided that analogies, presumptions of truth and worst case scenarios can be used to bridge difficulties in the data collection, so long as the outcomes achieved through these tools err on the "safe side" with reference to the problems under investigation (see 3.3.2).

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123 *cf.* BVerwG, adjudication of 23.4.2014 – 9 A 25.12, margin number 63.

124 BVerwG, adjudication of 28.3.2013 – 9 A 22.11, margin number 47; adjudication of 14.7.2011 – 9 A 12.10, margin number 62; adjudication of 12.3.2008 – 9 A 3.06, margin number 75.

125 *cf.* critique in *Gellermann*, in: Landmann/Rohmer, Umweltrecht, 2016, § 34 BNatSchG margin number 21.

126 *cf.* European Commission 2012a, p. 6 *et seq.*

127 BVerwG, adjudication of 14.7.2011 – 9 A 12.10, margin number 62 *et seq.*

128 *cf.* BVerwG, adjudication of 6.11.2013 – 9 A 14.12, margin number 52.

129 In bats, e.g. comprehensive bioacoustic surveys along transects, automated acoustic surveys using batcorders and sound recorders, as well as netting and searches for roosts.

130 *cf.* BVerwG, adjudication of 6.11.2013 – 9 A 14.12, margin number 47 *et sqq.*; adjudication of 28.3.2013 – 9 A 22.11, margin number 92.

131 *cf.* BVerwG, adjudication of 6.11.2013 – 9 A 14.12, margin number 47 *et sqq.* on bats.

132 BVerwG, adjudication of 28.3.2013 – 9 A 22.11, margin number 47.

133 BVerwG, adjudication of 6.11.2012 – 9 A 17.11, margin number 33.

134 *cf.* BVerwG, adjudication of 14.7.2011 – 9 A 12.10, margin number 64–67.

The BVerwG views both a faunistic potential analysis of the landscape[135] and monitoring that has been only been scheduled for the future as inadequate.[136]

3.6. Determination of the potential negative effects

All potential effects of a project or plan for which significant adverse impacts on the integrity of a Natura 2000 site cannot be excluded without remaining reasonable scientific doubts beforehand are to be determined within the scope of the appropriate assessment.[137] Not only an analysis of the relevant factors associated with the proposed development that may have an impact, but also a forecast of the negative effects on the Natura 2000 site concerned are required, as the assessment must be carried out before the project is realised (see 3.1.).[138] The data collection must also include impacts outside the boundaries of the site and indirect effects, if these can be attributed to the project (see 2.1).[139] Minor impacts are also to be determined, as a significant adverse effect on the site may result due to the specific situation pertaining in the site, previous pressures on the site, or the cumulative effects of other developments.[140] Comprehensive data must also be collected on effects if they will clearly have a significant adverse impact on a Natura 2000 site,[141] as the findings of the appropriate assessment must always be complete, precise and conclusive and the full conduct of the appropriate assessment is prerequisite to a derogating decision under Article 6(4) HD (see 4).

In particular, certain types of negative effects occur regularly in association with proposed developments. The following examples are highlighted:

- Loss of land in the site due to construction works and installations, resulting in the destruction of, or adverse impacts on, types of habitat and habitats and territories occupied by some species,[142]
- Effects of fragmentations in sites or of barriers both within the site as well as in relation to habitats or populations outside the site, especially in the case of

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135 BVerwG, adjudication of 6.11.2013 – 9 A 14.12, margin number 51 *et seq.*

136 BVerwG, adjudication of 14.7.2011 – 9 A 12.10, margin number 105 and headnote 6.

137 ECJ, adjudication of 7.9.2004 – C-127/02, margin number 54; BVerwG, adjudication of 17.1.2007 – 9 A 20.05, margin number 68; European Commission 2001, p. 20 *et seq.*; European Commission 2012a, p. 5 *et seq.*

138 BVerwG, adjudication of 17.1.2007 – 9 A 20.05, margin number 46.

139 ECJ, adjudication of 24.11.2011 – C-404/09, margin number 146 *et sqq.*, 166 *et sqq.*; BVerwG, adjudication of 9.7.2009 – 4 C 12.07, margin number 11. More detailed analysis in *Möckel* Nature Conservation 2017c.

140 cf. ECJ, adjudication of 26.4.2017 – C-142/16, margin numbers 56–63.

141 *cf.* ECJ, adjudication of 14.1.2016 – C-399/14, margin number 54.

142 *cf.*. ECJ, adjudication of 11.4.2013 – C-258/11, margin number 37 *et sqq.*; adjudication of 24.11.2011 – C-404/09, margin number 97 *et sqq.*; adjudication of 14.1.2016 – C-141/14, margin number 63 *et sqq.*

roads, railway lines and waterways, but also e.g. in the case of larger scale wind power plants or opencast mining,[143]
- Risk of collisions due to, for example, the operation of roads and railways or wind energy systems,[144]
- Changes to the water balance in the landscape through, for example, a reduction in the groundwater level or changes to/diversions of water bodies in favour of, e.g., roads or railways, mines, energy production, drinking water production or agriculture,[145]
- Emissions of noise, vibration, light and compounds within or into the site from the outside, such as nitrogen emissions from roads, power plants or agricultural land or chloride emissions from roads due to winter salting,[146]
- Human presence.[147]

Furthermore, an appropriate assessment that is oriented towards conservation objectives and focuses on effects is only possible if other negative effects are also considered in addition to the impacts caused by the proposed development.[148] In spite of the project-specific approach of the assessment, the appropriate assessment must not only determine the current pressures due to previous land use, developments that have been realised and long-range pollution, but also the potential adverse impact of other expected, but not yet realised projects and plans under Article 6(3) HD.[149]

3.7. Assessment of significance

Projects and plans are not permitted to have significant impacts on the integrity of Natura 2000 sites, either individually, or in combination with other plans and pro-

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143 *cf.* ECJ, adjudication of 20.5.2010 – C-308/08, margin number 25; adjudication of 24.11.2011 – C-404/09, margin number 146 *et sqq.*, 166 *et sqq.*; adjudication of 14.1.2016 – C-141/14, margin number 59, 75.

144 *cf.* ECJ, adjudication of 20.5.2010 – C-308/08, margin number 37–52.

145 *cf.* ECJ, adjudication of 15.5.2014 – C-521/12, margin number 12, 23; adjudication of 13.12.2007 – C-418/04, margin number 256 *et seq.*

146 *Nitrogen*: ECJ, adjudication of 15.5.2014 – C-521/12, margin number 12, 23, adjudication of 11.9.2012 – C-43/10, margin number 98 *et sqq.*; *Chloride*: BVerwG, adjudication of 3.5.2013 – 9 A 16.12, margin number 36 *et sqq.*; adjudication of 14.7.2011 – 9 A 12.10, margin number 78. *Noise/vibration*: ECJ, adjudication of 24.11.2011 – C-404/09, margin number 146 *et sqq.*, 166 *et sqq.*; *cf.* ECJ, adjudication of 10.11.2016 – C-504/14, margin numbers 35, 53; *Light/optical disturbance*: BVerwG, adjudication of 28.3.2013 – 9 A 22.11, margin number 74–76; adjudication of 23.4.2014 – 9 A 25.12, margin number 51; *cf.* ECJ, adjudication of 10.11.2016 – C-504/14, margin numbers 35, 53, 101 et seq., 114.

147 *cf.* ECJ, adjudication of 10.11.2016 – C-504/14, margin numbers 35, 53, 64.

148 *cf.* BVerwG, decision of 10.11.2009 – 9 B 28.09, margin number 3.

149 *Möckel* Nature Conservation 2017a.

jects, which therefore requires an assessment of the compatibility with the conservation objectives that have been defined for the site concerned. The assessment of significant effects raises a lot of detailed questions and will therefore be examined in greater detail in a separate contribution.[150]

A significant adverse effect does not need to have taken place, rather more, the possibility that it is "likely to have" a significant impact is sufficient under Article 6(3) HD.[151] Any threat of a disadvantageous adverse effect on the conservation objectives is essentially significant and must be rated as having "an adverse effect on the integrity of a site", whereby the probability that significant adverse impacts may arise from a proposed development is sufficient.[152] Hence, the recognition of thresholds related to bagatelles and irrelevance by the BVerwG is to be viewed as critical in this process as these undermine protection of the sites in the medium to long term.[153] Due to the basic requirements, a proposed development is permissible if no reasonable doubt remains that significant adverse impacts will be avoided based on the best scientific knowledge in the field (see 3.1).

Significance is a conservation-specific question that must be solved based on the circumstances of each individual case, without social or economic reflections, which must only be considered within the scope of a derogating approval in accordance with Article 6(4) HD. The crucial criterion for the evaluation of significance is the favourable conservation status based on the conservation objectives for protected habitats and species under Article 1 e) and i) HD.[154] Therefore, the type, scope and duration of adverse impacts is decisive to the question of significance. Permanent land loss due to land use change or intensification essentially always constitutes a significant adverse impact on protected habitat types, as a prerequisite to the favourable conservation status for a habitat type is that the area it covers in the site is stable or expanding.[155] In the case of protected species, adverse impacts must never disturb the species-specific population dynamics to such an extent that a species can no longer form a viable component of the natural habitat that it belongs to and continue to do so in the long

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150 see *Möckel* Nature Conservation 2017a.

151 *cf.* ECJ, adjudication of 24.11.2011 – C-404/09 margin number 144.

152 *cf.* ECJ, adjudication of 15.5.2014 – C-521/12, margin number 20; adjudication of 7.9.2004 – C-127/02, margin number 49; adjudication of 10.11.2016 – C-504/14, margin number 29; adjudication of 14.1.2016 – C-399/14, margin number 42 *et seq.*; adjudication of 14.1.2016 – C-141/14, margin number 58; adjudication of 24.11.2011 – C-404/09, margin number 142.

153 More detailed to this questions *Möckel* Nature Conservation 2017a.

154 ECJ, adjudication of 15.5.2014 – C-521/12, margin number 21; adjudication of 11.4.2013 – C-258/11, margin number 39; BVerwG, adjudication of 3.5.2013 – 9 A 16.12, margin number 28; adjudication of 12.3.2008 – 9 A 3.06, margin number 94; adjudication of 17.1.2007 – 9 A 20.05, margin number 42 *et seq.*

155 *cf.* ECJ, adjudication of 15.5.2014 – C-521/12, margin number 12, 23; adjudication of 13.12.2007 – C-418/04, margin number 256 *et seq.*; BVerwG, adjudication of 12.3.2008 – 9 A 3.06, margin number 124–126; adjudication of 17.1.2007 – 9 A 20.05, margin number 50. *cf.* ECJ, adjudication of 11.4.2013 – C-258/11, margin number 43, 46; adjudication of 14.9.2006 – C-244/05, margin number 46.

term.[156] Relevant factors are the habitat areas of the protected species, including their important areas for withdrawal, resting, nesting and feeding,[157] as well as their conservation status and their potential for improvement (cf. Article 1(i) HD). For this reason, even developments outside a Natura 2000 site may constitute adverse impacts that are pertinent to the assessment (see 2.1).

4. Consequences of a defective appropriate assessment

In accordance with the ECJ, an appropriate assessment that has been carried out under Article 6(3) HD is not appropriate if it is fragmentary and does not contain complete, precise and conclusive findings that are suited to the exclusion of any reasonable scientific doubt in relation to the effects on the integrity of the site in question (see 3.1). An inadequate survey of abundance and condition of the protected habitat types and species already constitutes a notable contravention that poses an obstacle to a proposed development and also to a derogating approval.[158] The documentation from the assessment must contain sufficient information to allow checks on whether the impacts were actually evaluated.[159] Failing this, according to the ECJ, the assumption must be made that not all perspectives relating to the plan or project have been ascertained under consideration of the best scientific knowledge in the field and that the authorities have also not gained the necessary certainty.[160] It is the responsibility of the national courts to carry out a comprehensive examination of whether the appropriate assessment complies with the requirements.[161]

In the event that the appropriate assessment and its documentation have not been carried out correctly and comprehensively, this not only contravenes Article 6(3) HD, but also means that no derogating approval can be granted as the knowledge on the compatibility or incompatibility with the conservation objectives defined for the site concerned constitutes an indispensable condition for the application of Article 6(4) HD.[162] This is the only way in which the weighing up of the interests in the integrity of the site

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156 BVerwG, adjudication of 17.1.2007 – 9 A 20.05, margin number 45. *cf.* ECJ on potential SCIs, adjudication of 24.11.2011 – C-404/09, margin number 163; adjudication of 20.5.2010 – C-308/08, margin number 21; adjudication of 14.9.2006 – C-244/05, margin number 46.

157 ECJ, adjudication of 2.8.1993 – C-355/90, margin number 36; BVerwG, adjudication of 1.4.2004 – 4 C 2.03, JURIS, margin number 45; adjudication of 21.6.2006 – 9 A 28.05, margin number 43.

158 ECJ, adjudication of 11.9.2012 – C-43/10, margin number 117 and headnote 7; adjudication of 20.9.2007 – C-304/05, margin number 69.

159 ECJ, adjudication of 24.11.2011 – C-404/09, margin number 103.

160 ECJ, adjudication of 24.11.2011 – C-404/09, margin number 106 *et seq*.

161 ECJ, adjudication of 11.4.2013 – C-258/11, margin number 44; adjudication of 24.11.2011 – C-404/09, margin number 100; BVerwG, adjudication of 17.1.2007 – 9 A 20.05, margin number 38.

162 settled ECJ case law, adjudication of 14.1.2016 – C-399/14, margin number 56 *et seq*.; adjudication of 15.5.2014 – C-521/12, margin number 36; adjudication of 11.4.2014 – C-258/11 margin number 35; adjudication of 16.2.2012 – C-182/10 margin number 74 *et seq*. Similar to, e.g. BVerwG, adjudication of 1.4.2015 – 4 C 6.14, margin number 27; adjudication of 10.4.2013 – 4 C 3.12, margin numbers 10 and 20; adjudication of 17.01.2007 – 9 A 20.05, margin number 114 and headnote 15.

and the public interests, as well as of the different alternatives, and an appropriate determination of the compensatory coherence measures is possible.[163] However, the BVerwG has recognised the option of using a presumption of truth/worst case scenario within the scope of a derogation assessment as an aid to imputing significant qualitative and quantitative adverse impacts.[164] This may result in appropriate outcomes in derogating decisions, but does not solve the difficulties in relation to defining the required coherence measures. In this sense, doubts about the compatibility with ECJ case law are apposite.

5. Conclusions

The importance of the European ecological network Natura 2000 lies not only in the number of its sites and the size of the area that is protected, but crucially also in the appropriate assessment carried out for all potentially impacting projects and plans. In particular, in conjunction with the other strict requirements laid down in Article 6(3) HD, clarification by the ECJ on the distribution of the risks associated with the determination and forecasting of impacts that count against the proposed development has resulted in a high level of protection for Natura 2000 sites. This is so high that the level of protection is sometimes regarded as too strict as it imposes restrictions that are viewed as excessive on social and economic liberties and developments. This neglects the fact that the Natura 2000 network is quite rightly given a prominent standing in the protection of biological diversity as it is designed to safeguard the common natural heritage of the European Union[165] and that nature conservation often get the short end of the weighing up with economic interests.[166] This heritage continues to be threatened by the persistent negative development of biodiversity in the EU and in Germany, such that every effort to protect it is required. In contrast, Natura 2000 hardly poses a great threat to economic development in the EU as most of the EU Member States have a very comprehensive network of infrastructure[167] made up of motorways, railways, navigable waterways, airports, industrial and commercial estates, etc., and additional infrastructure measures are possible within the scope of Article 6(4) HD.[168] Insofar as critics complain and find fault with the fact that appropriate assessments may be abused by citizens who are affected, stating that animals and plants now receive more protection than humans, this just simply misunderstands cause and effect. The cause of this use is need of the affected citizens for protection from noise,

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163 ECJ, adjudication of 15.5.2014 – C-521/12, margin number 36; adjudication of 16.2.2012 – C-182/10, margin number 75; adjudication of 11.9.2012 – C-43/10, margin number 114. Similar to BVerwG, adjudication of 17.1.2007 – 9 A 20.05, margin number 114 *et sqq.*

164 BVerwG, adjudication of 28.3.2013 – 9 A 22.11, margin number 99; decision of 17.7.2008 – 9 B 15.08, margin number 24.

165 ECJ, adjudication of 10.5.2007 – C-508/04, margin number 57.

166 *Bastmeijer* 2016, p. 387 (399 et seq.); *Schoukens/Cliquet* E&S 2016, 10 (p. 2 *et seq.*, 9 *et seq.*).

167 *cf. Ibisch et al.* science 2016, 1423 *et sqq.*

168 *Möckel* Nature Conservation 2017b.

pollutants and other adverse impacts on their environment, including on the scenery. Based on the current legal position in the EU, their interests are only to be taken into consideration on a regular basis within the scope of an assessment carried out during decisions made by the authorities. In these cases, the fact that no significant adverse impacts are to be expected under consideration of the best relevant scientific insights is not an obligatory condition for the authorisation of a proposed development. Utilisation of Natura 2000 conservation legislation thus reflects only the deficits in relation to the protection of citizens.

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